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# Small-Scale Agriculture Today

Office for Small-Scale Agriculture



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U.S. Department of Agriculture - Cooperative State Research Service - Agricultural Research For A Better Tomorrow

## AT ISSUE...IN SECTS VS. WEEDS

Foreign pest invaders in the United States are being attacked and, in many cases, controlled by natural methods. Our native biological diversity is threatened by immigrant insect pests and weeds from around the globe. But many of these immigrant pests -- Russian wheat aphid, Japanese beetle, Italian thistles, leafy spurge from Europe and the steppes of Asia -- and many more, are under attack by natural biological control agents, thanks to research by USDA's Agricultural Research Service (ARS), and to implementation of that research by USDA's Animal and Plant Health Inspection Service (APHIS) and State departments of agriculture.

From bases in Montpellier, France; Frascati near Rome, Italy; Thessaloniki, Northern Greece; Buenos Aires, Argentina, and Townsville, Australia, a rotating crew of American scientists and a permanent staff of FSN's (Foreign Service National employees of ARS) head into the hinterlands, the backwoods, and remote locations worldwide to explore for these native, natural enemies of immigrant pests. They discover the insects, mites, and pathogens that naturally control the insect pests and weeds in their native areas. They study their basic biology and specify their host preference. And then, for example, Gaetano Campobasso in Frascati cooperates with Norm Rees in Bozeman, Montana, to learn how to transfer the flea beetle, *Aphthona abdominalis* from Pisa, Italy, to the American Plains, where it could help control leafy spurge. For USDA, this kind of pest control -- classical biological control, (introducing an exotic natural enemy against an introduced pest or weed) -- began in 1918 in Europe against the European corn borer and against other insect pests and weeds introduced into the U.S. from South America, Australia, and the Orient.

Despite the world-class efforts of APHIS dangerous immigrant species continue and predictably will continue to find a foothold on U.S. farms, ranches, and natural areas. Environmental concerns, the high cost of applying farm production inputs, the need of farmers to make a profitable living, and the expectation of U.S. consumers to have safe and abundant food at low cost are all driving forces to use natural methods of insect pest and weed control, wherever such methods are appropriate.

Chemical pest control certainly will continue to be needed in some situations in the United States, but the ARS staff in Frascati, Thessaloniki, Montpellier, and other foreign locations working with their ARS, APHIS, and State cooperators in the United States, will solve many of our insect pest and weed problems, in environmentally safe ways.

## FOOTNOTE...

In September 1993, Bud Kerr, USDA-CSRS, spent a few days visiting and learning more about Integrated Pest Management (IPM) from USDA-ARS staff members -- Gaetano Campobasso in Italy, and Lloyd Knutson, Director, European Biological Control Laboratory, Montpellier, France.

## F. Y. I.

Many thanks for your help in cleaning up the OSSA mail list! We received lots of telephone calls, Faxes, postcards, and letters regarding address changes. Also, there were many nice comments about Small-Scale Agriculture Today.

OSSA likes to hear from you. Topics, technologies, and calendar of events (yours) are very important. However, please understand that we need to have your input at least 6 months prior to the date of any event.

If you no longer wish to receive our free quarterly newsletter or if you change your mailing address, contact: H.W. (Bud) Kerr, Jr., USDA-CSRS, OSSA, AG Box 2244, Washington, DC 20250-2244; telephone 202-401-1805, Fax 202-401-1804. It is always nice to hear from friends with a mutual interest -- small-scale farming/rural life.

## TOPICS AND TECHNOLOGY

**Superior Quality** - For details and prices of heavy-duty field and garden hoes, cut from tempered steel of a recycled disc blade, send a self-addressed and stamped envelope. Contact: Loren G. Kisby, Prohoe, P.O. Box 87, Munden, KS 66959; telephone 1-800-536-5450.

**Tip - Indoors**, the most common cause of failure in germination of seedlings is planting seeds too deeply, in too heavy a soil or soil mix, and in conditions that are not sterile.

**Boer Goat** - "With the exception of the South African Boer goat, imported from New Zealand in 1993, there are no true meat goat breeds in the United States. In April of 1993, the quarantine restrictions for the New Zealand Boers expired and the animals became available for importation into the United States...", Frank Pinkerton. (Grass Farmer, October 1993, p. 25) Contact: Nelson Escobar, Extension Goat Specialist, Langston University, Box 730, Langston, OK 73050; telephone 405-466-3836.

**Too Much Water** - Waterlogged soils are generally the result of heavy rainfall. However, under certain conditions, the flooding of soil by irrigation adversely affects plants by decreasing soil aeration and causing erosion and salt problems.

**One-Source** - "The Big Book of Gardening Skills" equips beginners and advanced gardeners with the knowledge to grow bountiful harvests and healthy landscapes, while emphasizing organic and non-toxic treatments. The 352-page paperback book is available, postpaid, for \$20.90. Contact: Storey Communications, P.O. Box 445, Pownal, VT 05261; telephone 1-800-441-5700.

**New Book** - A practical, easy-to-use guide to insect and mite pests of tree fruits, "Common Tree Fruit Pests" (NCR63) is a 250-page book containing more than 250 full-color photos, illustrations, charts, and tables. The price for the hard-cover version is \$37.50; soft-cover is \$30, check payable to Michigan State University. Contact: Halina Masek, Michigan State University, Bulletin Office, 10-B, Agriculture Hall, East Lansing, MI 48824-1039; telephone 517-355-0240.

**Makes Cents!** - Why keep buck goats on your farm when it's more economical to buy semen -- "a buck in a straw" -- for artificial insemination. For more information, contact: Ray McKinnie, North Carolina A&T State University, Cooperative Extension Program, Box 21928, Greensboro, NC 27420-1928; telephone 919-334-7957.

**Words to the Wise** - When pruning trees, don't use stepladders, chairs, or other makeshifts -- keep your feet on the ground! To prune limbs above your reach, use long-handled pruners and pole saws.

**Tax Help?** - Telephone the Internal Revenue Service information number, 1-800-829-1040.

**Cost \$12** - Proceedings of the 1994 New York State Vegetable Conference is available. Make your check payable to New York State Vegetable Growers Association. Contact: Jean Warholic, NYSVGA, P.O. Box 4256, Ithaca, NY 14852-4256; telephone 607-539-7648.

**Video** - The Fungal Jungle runs about 15 minutes and is a combination of slides, live action video, and animation. It is ideally suited as an introduction to the world of mushrooms. To get a copy, send \$28. Contact: Larry Evans, P.O. Box 7306, Missoula, MT 59807; telephone 406-543-6630.

**Question** - Do you know the difference between honey bees and pollen bees? Answer is somewhere in this issue.

**Andrew Recovery** - The January-February 1994 issue of Tropical Fruit Growers Newsletter provides a brief article on the current status of most tropical fruits. "Comments" may be obtained by sending a stamped envelope with self-addressed label and contacting: Carlos Bolerdi, Dade - IFAS Cooperative Extension Service, 18710 SW 288 St., Homestead, FL 33030-2309; telephone 305-248-3311.

**IPM** - While supplies last, single copies of "How to Control House and Stable Flies Without Using Pesticides" may be obtained at no cost by contacting: L.G. Pickens, USDA-ARS, Room 120, Building 305, BARC-E, Beltsville, MD 20705; telephone 301-504-8274, Fax 301-504-8881.

**The Backyard Orchardist** - The 250-page book is a complete guide to growing fruit trees in the home garden. Cost is \$17.45, check payable to OttoGraphics. Contact: Stella B. Otto, OttoGraphics, 8082 Maple City Rd., Maple City, MI 49664-9760; telephone 616-228-7513.

**1994 Celebration** - The National Garden Bureau has designated 1994 as the "Year of the Snapdragon and the Watermelon." To obtain interesting free fact sheets, send a self-addressed stamped (58 cents), business-size envelope to: Mary Nielson, National Garden Bureau, 1311 Butterfield Rd., Suite 310, Downers Grove, IL 60515; telephone 708-963-0770.

**Asparagus** - This is the latest fact sheet of the series "A Small-Scale Agriculture Alternative" from the USDA Office for Small-Scale Agriculture. Free, the publication lists several sources of information on cultural practice, marketing, pest control, etc. Contact: Bud Kerr, USDA-CSRS, AG-Box 2244, OSSA (Asparagus), Washington, DC 20250-2244; telephone 202-401-1805, Fax 202-401-1804.

**Overheard** - "People will pay more for things they can look at or play with than things they can eat" and "We sell the side issues; the actual tomatoes and peaches are something we hand to the customers." Words of Whitney Critzer, a speaker at the 11th West Virginia Direct Marketing Conference, February 5, 1994.

**Bedding Plant Growers** - If you missed Grower Expo '94 but would like to receive a complete listing of conference tapes, contact: Sylvia Hemmer, Ball Publishing, P.O. Box 9, Batavia, IL 60510-0009; telephone 708-208-9080, Fax 708-208-9350.

**Acid/Water** - Rhubarb is one of the most acid of all vegetables; the juice has a pH of 3.1 to 3.2. The tender stalks are about 94 percent water.

**Costs \$30** - "Net \$25,000 in 6 months on 20 acres" is the subtitle of a newly released 340-page book titled "Pastured Poultry Profits." Contact: Joel F. Salatin, Polyface Inc., Rt. 1, Box 281, Swoope, VA 24479; telephone 703-885-3590.

**Answer** - Honey bees store large amounts of liquid honey harvested by people. They make combs of wax. Conversely, pollen bees -- there are about 20,000 species worldwide -- do not store large amounts of honey edible by people. They are valued for their pollination service, rather than honey and wax production.

**Growing Up** - Smokey Bear celebrates his 50th year as a forest firefighter on August 9, 1994, with a birthday wingding on The Mall in Washington, DC.

**Questions** - For additional information on Federal pesticide recordkeeping requirements, contact: Tom Williams, USDA-AMS, Pesticides Records Branch, 8700 Centerville Rd., Suite 200, Manassas, VA 22110; telephone 703-330-7826, Fax 703-330-6110.

**Opposite Directions** - "While retailers and shoppers continue to see broccoli sales increasing, people are telling a different story about cauliflower. Many shoppers and retailers will tell you that cauliflower's popularity is either declining, or at best is not growing nearly as fast as broccoli." (The Produce News, December 13, 1993, p. 1A)

**Water Care** - For information about bottled water, call the International Bottled Water Association at 1-800-928-3711.

**169th Year** - Baer's Agricultural Almanac & Gardener's Guide, 1994 Edition, presents farm and garden tips, weather forecasts, moon phases, and recipes. \$3 a copy postpaid. Contact: Serena Nova, Baer's, P.O. Box 328, Lancaster, PA 17608; telephone 717-392-0733.

**Popular** - The plans for a small homemade bean and pea sheller are again available at \$2. Make check payable to New York State Vegetable Growers Association. Address: P.O. Box 4256, Ithaca, NY 14852-4256.

**Supply** - "The world banana crop is about 70 million metric tons a year, of which 10 percent is exported. Globally, the fruit ranks after rice, milk, and wheat in total cash value." (The Journal of Commerce, December 20, 1993, p. 7B)

**Software** - Costing less than \$100, a computer program for small and large ranchers considering intensive grazing management teaches paddock layout and grass production, with database for record-keeping. For more information contact: Robert Cessac, 2362 State Rd. O, Higbee, MO 65257; telephone 816-248-5201.

**Alternative Forage Legumes** - The 40-page bulletin "Forage Legumes: Clovers, Birdfoot Trefoil, Cicer Milkvetch, Crownvetch, Sainfoin and Alfalfa" covers the identification, origin, use, management, and other aspects of 10 perennial legumes (including 5 clovers). Send check for \$5 for item SB-5963, payable to University of Minnesota. Contact: Distributions Center, 20 Coffey Hall, University of Minnesota, St. Paul, MN 55108-6064; telephone credit card orders 612-625-8173.

## ANOTHER CONSIDERATION

"Night Tillage may be an innovative way to manage weed germination. Research conducted in Germany indicates tillage in the absence of light does not stimulate photo-sensitive weed seeds to germinate. Large-seeded weeds and crops germinate in the light or dark, but small seeds tend to require some exposure to light before they will germinate. Thus, night tillage can avoid causing weed seeds to germinate when they are brought to the soil surface and then reburied. In side-by-side strips described in one study, ground cover by weeds was 80 percent in plots worked during the day, versus only 2 percent in plots worked at night! In this strategy, early cultivations, such as plowing on bright days to provoke a flush of emerging weeds in the next 4 weeks, reduce the weed seed bank. Subsequent soil disturbances, such as planting and cultivation of crops, are done in the dark, at least 1 hour after sunset and before sunrise. Avoid all light pollution, including tractor headlights or other light visible to the human eye. Use of a military-type infrared scope with an infrared spotlight or a searchlight with a short-wave cut-off filter is recommended for the driver. Cloudy skies at night are preferable because light levels during cultivation should be as low as possible." (Reprinted with the author's permission from GROWER: New England Vegetable and Small Fruit Newsletter, Vol. 93-7, July 1993.)

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## CALENDAR OF EVENTS

**April 14-17, 1994** - The 16th Annual Shepherds Extravaganza, Puyallup Spring Fair, Western Washington Fairgrounds, Puyallup, WA. Contact: Isabelle Ray, 15502 SE 352nd St., Auburn, WA 98002; telephone 206-833-8433.

**April 15-17, 1994** - Hydroponic Society of America's (HSA) 15th Annual Conference, Akron Hilton Inn at Quaker Square, Akron, OH. Contact: Patty Bates, HSA, P.O. Box 3075, San Ramon, CA 94583; telephone 510-743-9605, Fax 510-743-9302.

**May 7-8, 1994** - Eastern Cashmere Association Annual Meeting and Seminar, Turf Valley Hotel and Country Club, Ellicott City, MD. Contact: Marilyn Ackley, FFD1, Box 2610, Buckfield, ME 04220; telephone 207-336-2948.

**May 7-8, 1994** - The 21st Annual Maryland Sheep and Wool Festival, Howard County Fairgrounds, West Friendship, MD. Contact: Mary Streaker, 1739 Circle Rd., Towson, MD 21204, telephone 410-823-4037.

**May 28, 1994** - Eighth Annual Baltimore Herb Festival, 10 am to 5 pm, Leakin Park (just off the Baltimore Beltway). Contact: Mary Louise Wolf, 2301 Pickwick Rd., Baltimore, MD 21207; telephone 410-448-0406.

**June 9, 1994** - Virginia Raspberry, Strawberry and Highbush Blueberry Day, Blackstone VA. Contact: Herbert D. Stiles, Southern Piedmont Agricultural Research and Education Center, P.O. Box 448, Blackstone, VA 23824; telephone 804-292-5331.

**June 9-12, 1994** - Cuisine, Agriculture, and Social Change Conference, Westward Look Resort, Tucson, AZ. Contact: Ann Tinsley, Department of Nutritional Sciences, Shantz 309, University of Arizona, Tucson, AZ 85721; telephone 602-621-1534.

**June 19-22, 1994** - The Management of Water and Wastewater Solids for the 21st Century: A Global Perspective, Washington, DC. Contact: Libby Strickland, Water Environment Federation, 601 Wythe St., Alexandria, VA 22314-1994; telephone 703-684-2464.

**July 5-8, 1994** - 7th North American Blueberry Research-Extension Workers Conference, Beltsville Agricultural Research Center, USDA- ARS, Beltsville, MD. Contact: Ron Korcak, Fruit Lab, USDA-ARS, Rm. 111, Bldg. 004, BARC-W, 10300 Baltimore Ave., Beltsville, MD 20705; telephone 301-504-5650, Fax 301-504-5062.

### PLEASE CIRCULATE

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